

Aluminum Firm Adds 2 Presses

Expansion activities at Harvey Aluminum in Torrance during the past year included the installation of extrusion presses and supporting equipment in conjunction with the Air Force heavy press program. Harvey is the only plant on the West Coast participating in this program.

Harvey put into operation a huge 8,000 ton hydraulic extrusion press. Aluminum alloy extrusions from this press are being used for airframe and missile structural components.

A companion 12,000 ton extrusion press, the largest ever built in this country, is ready to go into production.

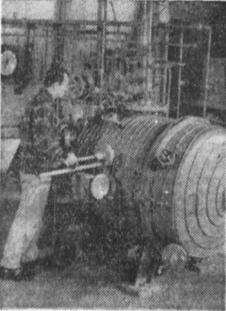
Heavy press supporting equip-

National Supply Plays Outstanding Part in Rotary Drilling Development

Specialist Awarded Silver Wings

Specialist Third Class James E. Sullivan, has successfully completed a rugged three week basic airborne course at the 101st airborne division school, and was awarded the Silver Wings of an army parachutist in formal ceremonies at this military post.

He is the son of Mrs. James E. Sullivan, 1806 W. 238th St. A member of the 101st airborne division, Sp-3 Sullivan completed two rigorous weeks of physical conditioning and group instruction and, in his third week of training, made five parachute jumps from an aircraft in flight to qualify for the coveted parachutist badge.



The Torrance plant of The National Supply has probably done more than any other plant to extend oil drilling depths downward.

For this plant, established in Torrance in 1912 by the Union Tool company and operated since 1920 by National Supply, played an outstanding part in the development of rotary drilling, which makes today's great depths possible.

Early drilling was by the cable-tool method, in which a chisel-shaped bit, supported by the rig, is dropped repeatedly with a hammer blow effect to break up the rock and earth of the formation. From time to time a bailing device is run to the bottom of the hole to bring out the chips.

Rotary Drilling

In rotary drilling, a multi-toothed bit, at the end of a string of drill pipe, is rotated constantly in order that it may chew its way down. Drilling slush, a mixture of mud and water, is pumped down through the drill pipe and up around the outside of the pipe, to flush out the cuttings. From time to time, as the bit goes deeper, another length of drill pipe is attached to the string already in the hole.

Rotary drilling first attracted notice when used to drill the famous "Spindletop" well, near Beaumont, Texas, in 1901. It came to the attention of Edward Double, a young Pennsylvanian who joined the Union Tool company (known originally as the Union Oil Well Sup-

ply company and for a while as the Union Oil Tool co.) shortly after its establishment by Lyman Stewart in 1900.

Under his leadership the Union Tool shop at Santa Paula soon outgrew its quarters. Less than two years after his arrival it was necessary to purchase a large tract in Los Angeles, but outgrew that. Finally, unable to obtain more space for expansion in that area, the company moved to Torrance.

Double took the light and undependable rotary machinery of the early 1900s and so improved it that it superseded cable tools in California and began its spread all over the world. Today about 84 per cent of drilling is with rotary rigs.

Depth Records

Whereas the world's first oil well, in 1859, was only 69 1/2 feet deep, and the 5,000-foot depth was not reached until 50 years later, with the development of rotary drilling new depth records were made in comparatively rapid order.

The 10,000-foot mark was passed in 1930 and the 15,000-foot mark in 1938. A Torrance-made National rig, in 1949, was the first to drill below 20,000 feet. Another National rig drilled to 21,482 feet near Bakersfield, Calif., in 1953, and the present record, 22,750 feet, was made by a National rig in Louisiana in 1955.

National rigs, with name plates indicating they were made in Torrance, are used not only in the United States and Canada, but throughout the world.

A national rig is being used on the Pacific Driller No. 1, first floating platform for offshore drilling to be put into active service in the Pacific Ocean. A rig of this same type was chosen for deep drilling in the "crooked hole" country in the foothills of southern Alberta, Canada.

Another of these rigs was shipped during the year to Italian Somaliland, where barges carried it from the ship to the beach, and where roads had to be built to carry it to its inland location. Still another is doing wildcat drilling, to depths below 12,000 feet, in Japan where previous drilling did not exceed 6,000 feet.

Two National rigs, sectionalized so that no load exceeds 4,000 pounds, are being used in Papua, on the island of New Guinea, where they are flown to their jungle locations by helicopter.

Local Plant

The yard of National's Torrance plant often takes on the appearance of an oil field location as a big rig is "rigged up" prior to shipment. In addition to the components manufactured at the plant, others are brought in from manufacturing plants of other companies, in various parts of the country.

First the steel substructure is put in place, and then such components as the draw works, rotary table, and others are positioned on it. Engines and mud tanks, also are put in position, after which the necessary piping, hoses, and wiring are placed. After the rig is test operated, to eliminate any possible "bugs," the rig is separated into sub-assemblies suitable for shipment.

National Supply's Torrance plant is the largest completely integrated machinery manufacturing plant in the west. In addition to oil field equipment, it manufactures heavy machinery and maintenance and operating equipment for many basic industries, such as steel, aluminum, mining, and cement. Other products include Ordnance material and aircraft parts, as well as forgings, castings, and machinery for dozens of industrial uses.

National Supply is the world's largest manufacturer and distributor of oil field machinery and equipment. It has six plants and operates 128 oil field supply stores.

MELTING FURNACE

National Supply co.'s research facilities for studying super quality steels have been expanded at Torrance, Calif., by installation of a vacuum melting furnace in which experimental quantities (up to 50-lb. ingots) of these steels and alloys are produced. The operator slides a control arm to charge desired amounts of alloy into the crucible as he watches the melting process through an inspection port. Steel to be melted is charged through a chamber on top of the furnace. Furnace pressures are reduced to less than 5 microns.

Harcraft Part Of Harvey

Harcraft Brass, a division of Harvey Machine co., Torrance, manufactures a complete line of plumbing fixtures for bathroom and kitchen.

These Harcraft fixtures are shipped all over the country and are used for residential and house trailer installations.

In addition to its manufacturing facilities, Harcraft operates a new automated plating plant, a modern assembly department, and a complete metallurgical laboratory.

The Harcraft line includes faucets, centersets, stops, bath and shower fittings, and flexible water connections.

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LOOKING AHEAD

with

HARVEY

Through new additions to its plant, its equipment and its staff, Harvey Aluminum is consolidating its position and is moving steadily forward in the front rank of America's fully integrated aluminum producers.

At this moment, some of the largest machinery ever built in America is being installed for forming aluminum, titanium and alloy steels into the shapes needed for residential and industrial buildings, transportation, furniture, appliances, commercial aircraft and the defense industries.

Backing these giant forging and extrusion presses are scientific instruments for analysis and control, a completely new metallurgical facility to develop tomorrow's new alloys . . . to speed today's production . . . and to maintain the quality for which Harvey is world famous.

Altogether . . . for both Harvey and the people of Torrance . . . it's a big present, working toward a bigger future.

Big future at Harvey for you, too!

Harvey's expanding plant and production program calls for new skills, new people. To work near home in one of the West's most modern plants . . . in an industry that's expanding constantly . . . look into job opportunities at Harvey Aluminum. It can be important and profitable for you for years to come.

Making the most of aluminum . . . for everyone

Harvey is a leading independent producer of quality aluminum products. Extrusions in all alloys and in all sizes, special shapes, press forgings, hollow sections, structurals, rod and bar, forging stock, pipe, tube, impact extrusions, aluminum screw machine products and related products. Harvey is also producing similar items in titanium and steel.



Harvey Aluminum Sales, Inc., Torrance, California Branch Offices in Principal Cities